

system applications, firmware applications, and/or any other application. Additionally, processor 610 has the capability to execute instructions in order to communicate with any or all of the components of electronic device 600. For example, processor 610 can execute instructions stored in memory 608.

[0041] Communication circuitry 612 may be any suitable communications circuitry operative to initiate a communications request, connect to a communications network, and/or to transmit communications data to one or more servers or devices within the communications network. For example, communications circuitry 612 may support one or more of Wi-Fi (e.g., a 802.11 protocol), Bluetooth®, high frequency systems, infrared, GSM, GSM plus EDGE, CDMA, or any other communication protocol and/or any combination thereof.

[0042] Input/output circuitry 614 can convert (and encode/decode, if necessary) analog signals and other signals (e.g., physical contact inputs, physical movements, analog audio signals, etc.) into digital data. Input/output circuitry 614 can also convert digital data into any other type of signal. The digital data can be provided to and received from processor 610, storage 604, memory 608, signal processor 606, or any other component of electronic device 600. Input/output circuitry 614 can be used to interface with any suitable input or output devices. Furthermore, electronic device 600 can include specialized input circuitry associated with input devices such as, for example, one or more proximity sensors, accelerometers, etc. Electronic device 600 can also include specialized output circuitry associated with output devices such as, for example, one or more speakers, earphones, headphones, etc.

[0043] Lastly, bus 616 can provide a data transfer path for transferring data to, from, or between processor 610, storage 604, memory 608, communications circuitry 612, and any other component included in electronic device 600. Although bus 616 is illustrated as a single component in FIG. 6, one skilled in the art would appreciate that electronic device 600 may include one or more components.

[0044] While certain aspects have been described and shown in the accompanying drawings, it is to be understood that such embodiments are merely illustrative of and not restrictive on the broad invention, and that the invention is not limited to the specific constructions and arrangements shown and described, since various other modifications may occur to those of ordinary skill in the art. The description is thus to be regarded as illustrative instead of limiting. In addition, to aid the Patent Office and any readers of any patent issued on this application in interpreting the claims appended hereto, applicants wish to note that they do not intend any of the appended claims or claim elements to invoke 35 U.S.C. 112(f) unless the words “means for” or “step for” are explicitly used in the particular claim.

What is claimed is:

1. A driver assembly comprising:

- a driver module having a driver frame and a diaphragm coupled to the driver frame, the driver frame defining a front volume chamber coupled to a first side of the diaphragm and a back volume chamber;
- an internal control leak formed through the driver frame to couple the front volume chamber to the back volume chamber; and
- a first driver vent and a second driver vent formed through the driver frame to couple a second side of the dia-

phragm to the back volume chamber, wherein a centroid of the first driver vent is aligned with a centroid of the second driver vent.

2. The driver assembly of claim 1 wherein the internal control leak, the first driver vent and the second driver vent are formed through a same wall of the driver frame that the diaphragm is coupled to.

3. The driver assembly of claim 1 wherein the internal control leak is a first internal control leak, the assembly further comprising a second internal control leak.

4. The driver assembly of claim 3 wherein the first internal control leak and the second internal control leak are radially outward to the first driver vent and the second driver vent.

5. The driver assembly of claim 1 wherein the first driver vent and the second driver vent have a same shape.

6. The driver assembly of claim 1 wherein a shape of at least one of the first driver vent and the second driver vent is asymmetrical.

7. The driver assembly of claim 1 wherein the centroid of the first driver vent and the centroid of the second driver vent are aligned with a center of the diaphragm.

8. The driver assembly of claim 1 further comprising:

a single piece of acoustic mesh acoustically coupled to the internal control leak and one of the first acoustic vent or the second acoustic vent.

9. The driver assembly of claim 1 further comprising:

an enclosure having an enclosure wall that forms an interior chamber and an acoustic outlet port to an ambient environment, wherein the driver module is positioned within the interior chamber and the acoustic outlet port couples the front volume chamber to the ambient environment.

10. An ear bud having a driver assembly comprising:

an enclosure having an enclosure wall that forms an interior chamber and an acoustic outlet port coupling the interior chamber to an ambient environment;

a driver module positioned within the interior chamber, the driver module having a driver frame to which a diaphragm and a magnet assembly are coupled, the driver frame dividing the interior chamber into a front volume chamber coupled to a first side of the diaphragm and a back volume chamber;

an internal control leak formed through the driver frame to couple the front volume chamber to the back volume chamber;

a first driver vent and a second driver vent formed through the driver frame to couple a second side of the diaphragm that faces the magnet assembly to the back volume chamber; and

a rear vent formed through the enclosure to couple the back volume chamber to the ambient environment.

11. The driver assembly of claim 10 wherein the internal control leak is positioned through a portion of the driver frame that is radially outward to a portion of the driver frame the diaphragm is coupled to.

12. The driver assembly of claim 10 wherein the first driver vent and the second driver vent are positioned through a portion of the driver frame that is radially inward to a portion of the driver frame the diaphragm is coupled to.

13. The driver assembly of claim 10 wherein a centroid of the first driver vent and a centroid of the second driver vent are arranged at diametrically opposed locations around the diaphragm.